USGS science for a changing world

Earthquake Shaking **Green** Alert

GSN USAID FROM THE AMERICAN PEOPLE ANSS

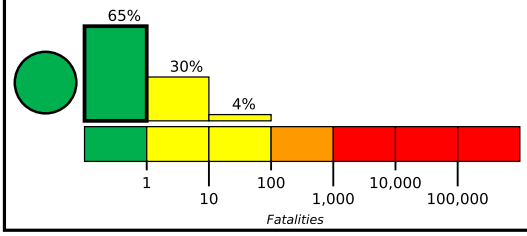
M 5.4, 22 km WSW of El Hoyo, Argentina

Origin Time: 2022-05-10 08:42:07 UTC (Tue 05:42:07 local)
Location: 27.1087° S 63.4433° W Depth: 579.3 km

PAGER Version 2

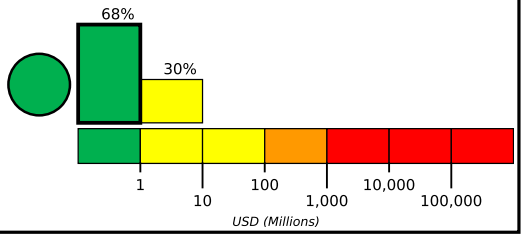
Created: 2 hours, 2 minutes after earthquake

Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses

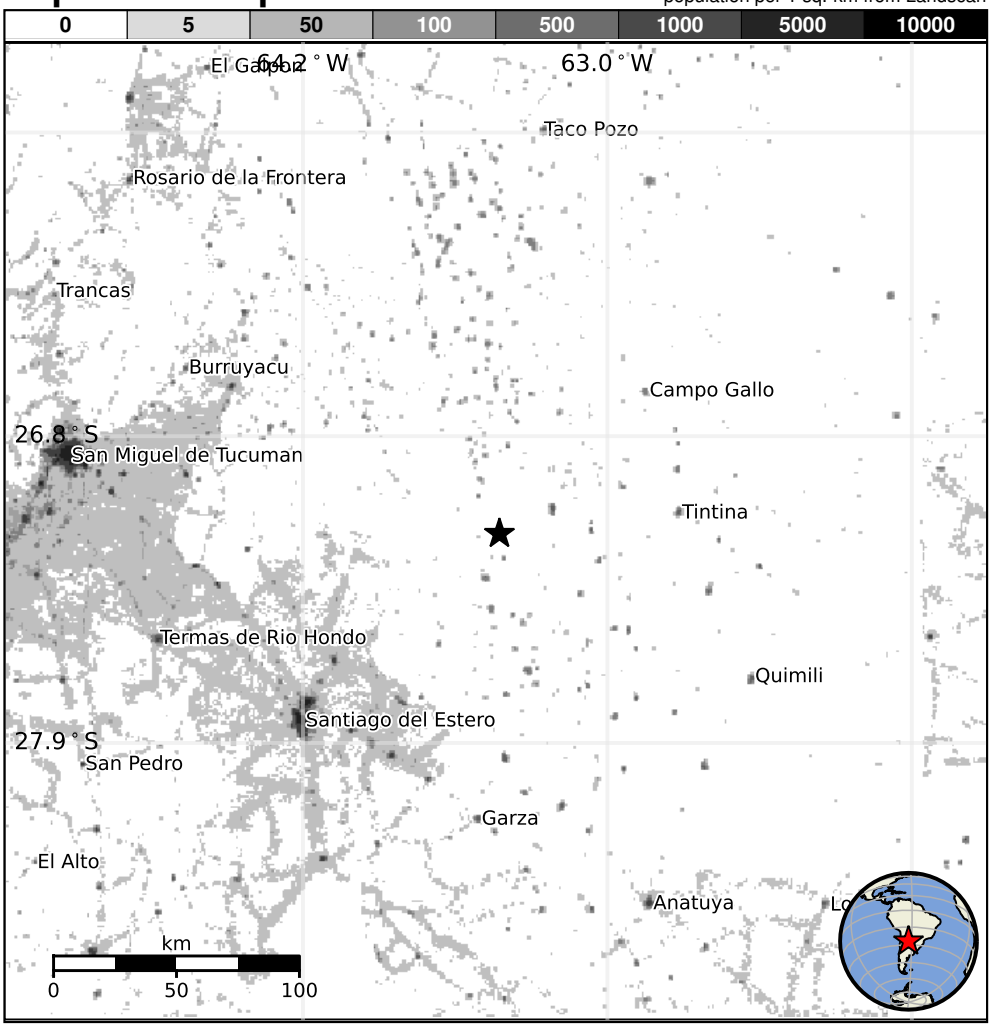


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		2,489k	0	0	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		**I**	**II-III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X+**
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	**Resistant Structures**	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are adobe block with concrete bond beam and unreinforced brick with concrete floor construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2002-05-28	382	6.0	VI(9k)	0
1973-11-19	304	5.9	VII(9k)	–
2004-09-07	285	6.1	VIII(13k)	1

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
I	Yerba Buena	51k
I	Colonia Dora	2k
I	**Garza**	**<1k**
I	Gancedo	4k
I	Frias	<1k
I	Fernandez	<1k
I	**San Miguel de Tucuman**	**781k**
I	**Santiago del Estero**	**355k**
I	Tafi Viejo	48k
I	Alderetes	38k
I	Famailla	31k

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/us7000h8a8#pager

Event ID: us7000h8a8